

NAKED DATA vs UXP DATA TRANSFER

- 100 samples
- Client -> Linux Ubuntu
 - Memory: 8GB
 - No. of CPU: 4
 - Intel(R) Core (TM) i3-7100U
- Time is measured at the start of the program and at the end of the program.
- The CPU Execution Time is multiplied by the Clock Rate (2.4 GHz) to get the number of clock cycles.
- The resource usage for naked byte includes transfer using naked socket whereas the resource consumption for UXP includes creation of the UXP plus the transfer of UXP using socket.

Table 1: Dataset Information

Naked Data	UXP object
1byte	25.3 kB (25,257 bytes)
1KB (1024bytes)	26.3kB (26,338 bytes)
100kB (100,000 bytes)	125.3kB (125,297 bytes)
500kB (500,000 bytes)	525.4 kB (525,421 bytes)
1MB (1,048,576 bytes)	1.1MB (1.074,149 bytes)

The following graph depicts CPU Clock Cycles vs Payload.

- It shows that the number of CPU clock cycles increases with size of the Payload.
- The CPU clock cycles is significantly higher for UXP than for naked byte as expected because the CPU Execution time is higher for UXP (creating UXP+ transporting UXP) than just transporting naked data.

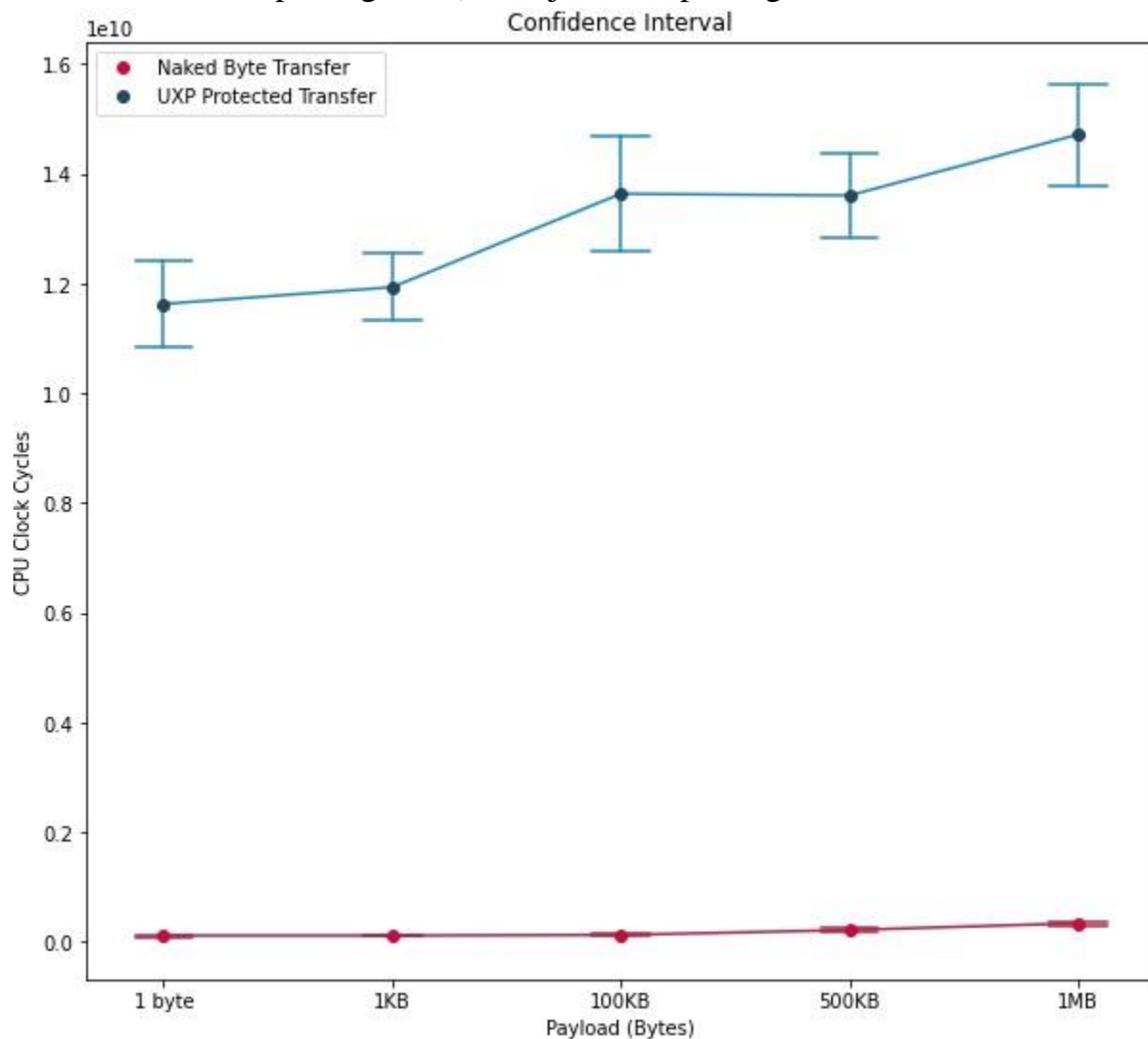


Figure 1: CPU Clock Cycles vs Payload

The following graph is for clarity and shows the above graph with focus on naked byte transfer only.

- It's clear that the CPU clock cycle increases with payload size.

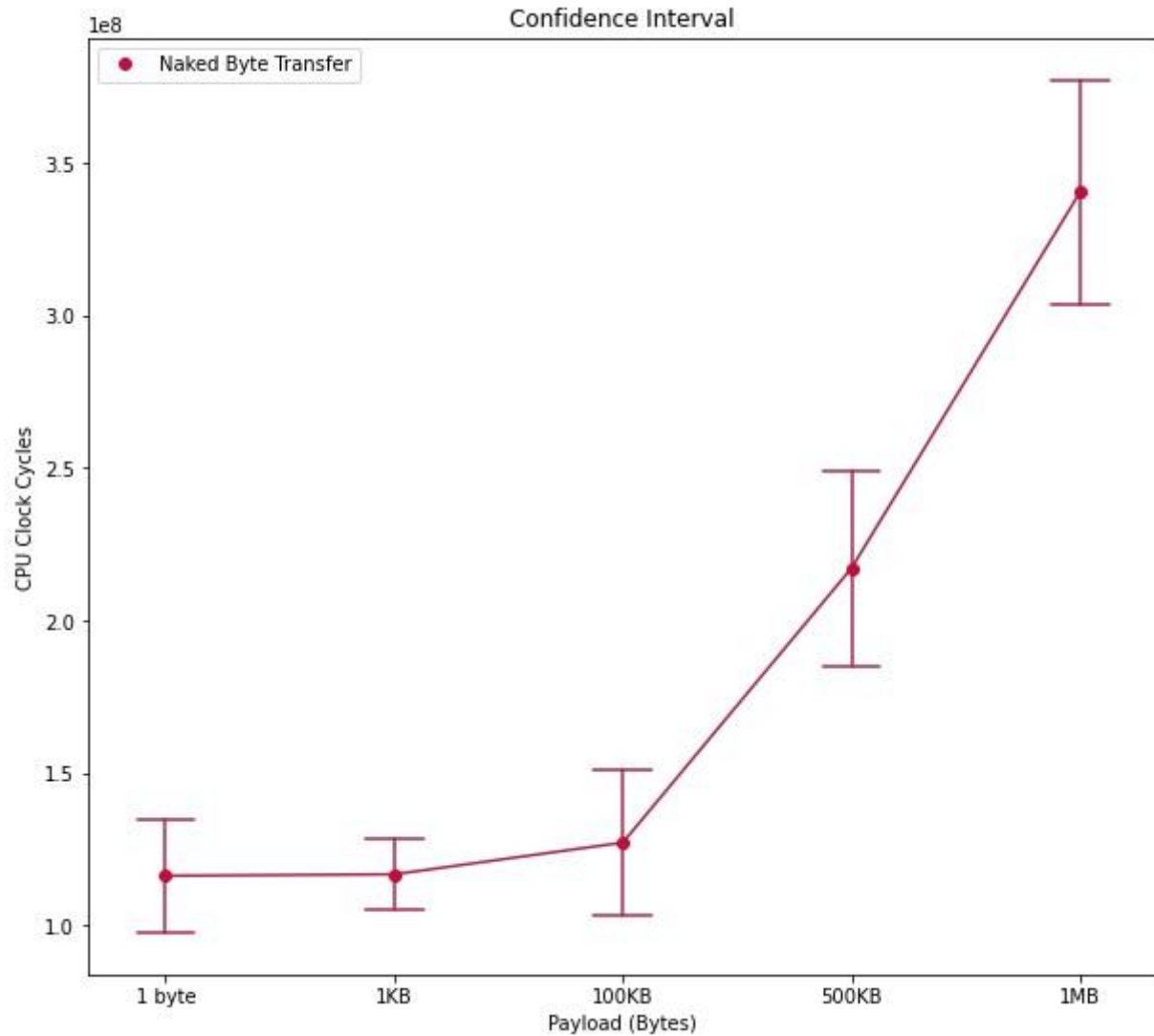


Figure 2: CPU Clock Cycles vs Payload for Naked Byte Transfer